

Table 1. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for alpha-cypermethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I030992-00001	Turf, public area	5/10/2018	GA	Chatham	Possible	Registered Use	Honey Bee	4 bee hives	Mortality	In May 2018 a Tybee Island, Ga beekeeper reported pesticide poisoning with bee mortality in the "thousands" when Fendona (BASF product) was applied to about 100 fire ant mounds in 7.5 acre park. The largest of hives with nearly 100,000 bees was most heavily impacted. There are a total of four hives housing about 200,000 bees.
		No new honey bee incidents to report for alpha-cypermethrin from November 2018 to August 2019								
AQUATIC INCIDENTS										
		No new aquatic incidents to report for alpha-cypermethrin from November 2018 to August 2019								

Table 2. Summary of 2018 and 2019 Searches for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for beta-cyfluthrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for beta-cyfluthrin from November 2018 to August 2019								

Table 3. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EHS) for Bifenthrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I028401-00015	Agricultural area	9/1/2015	CA	Fresno	Unrelated	Undetermined	Honey Bee	147 colonies	Mortality	On September 25, 2015, the Fresno County Agricultural Commissioner's Office (CAC) received a Report of Loss, Non-performance or Damage Report (ROL) from an apiary owner reporting dead bees and empty hives involving 147 colonies. On October 9, 2015, the apiary owner amended the ROL and changed the number of damaged colonies to 107. The owner suspects the damage was the result of a ground application of Assail 70WP to an orange orchard located north of the colonies. On September 28 Fresno CAC staff, accompanied by the apiary owner, collected three swab samples and dead bee samples. Fresno CAC is continuing to investigate the incident.
I029512-00014	Agricultural area	9/16/2015	NR	Not Reported	Probable	Misuse	Honey Bee	Not Reported	None	A beekeeper reported on September 16, 2015 that he was concerned that an aerial application had drifted onto him and his property. An application of Sniper (bifenthrin) and Beleaf (flonicamid) to a neighboring pumpkin field. The vegetation sample that was collected was from a goldenrod plant that was in bloom and had honeybees actively foraging during the time of the application. Laboratory analysis of the vegetation sample detected the bifenthrin and flonicamid. The applicator was cited for misuse of a pesticide by not following the label instructions pertaining to bees and other violations.
I029385-00001	Agricultural area	4/19/2016	IN	Boone	Possible	Registered Use	Honey Bee	Several hives	Mortality	On April 22, 2016, the beekeeper in Mechanicsburg, Indiana contacted the Compliance Officer of the Office of Indiana State Chemist to report a bee kill from suspected pesticide use on a nearby field. The sampled dead bees submitted showed 4.6 ppb of clothianidin. All fields they planted on either the 19th or 20th of April 2016. Some had used products containing clothianidin for seed corn as well as products with other actives of high toxicity to bees.
I029787-00008	Residential	5/2/2016	OR	Not Reported	Possible	Registered Use	Honey Bee	Not Reported	Mortality	June 23, 2016. Oregon Incident Case Number 160655. Spraying of Linden trees for aphid control in apartment complex appeared to result in death of honeybees and bumblebees. No sampling was possible due to time lag between investigation and reported deaths. Some of the pesticides used are toxic to bees.
I029787-00008	Residential	5/2/2016	OR	Not Reported	Possible	Registered Use	Bumble Bee	Not Reported	Mortality	Not Reported

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
I029111-00001	Residential	7/25/2016	MA	Plymouth	Probable	Misuse (intentional)	Honey Bee	1000	Mortality	NPIC Report dated 7/25/16. Bee kill incident was reported in Plymouth, MA. Pest control company admitted to spraying Telsar and Bifenthrin for mosquito control near residence and claimed the neighbor never mentioned the bees. beekeeper said her hives were close (20 feet) asked them to spray less or spray at night. Company admits to spraying these chemicals every two weeks. The company refused to stop or spray in evening.
I029547-00017	Agricultural area	7/29/2016	IA	Not Reported	Exposure Only	Undetermined	Honey Bee	Several Hives	None	Iowa Incident- 17.0065. Aerial application of Bifenthrin product (Hero Insecticide) performed in late morning hours when bees would be foraging. This is a violation of Iowa bee rules. Bee keeper was concerned about exposure to bees. No samples or losses included in report.
I029547-00015	Agricultural area	7/29/2016	IA	Not Reported	Possible	Misuse	Honey Bee	Not Reported	None	Violation of Iowa bee rule suspected when aerial application was made with bifenthrin during late morning hours (7-10 AM) when bees would normally be foraging. Beekeeper registered complaint.
I029547-00008	Agricultural area	8/5/2016	IA	Lyon	Exposure Only	Undetermined	Honey Bee	several hives	None	Beekeeper reported that aerial application of bifenthrin product was made near his hives in Larchwood, Iowa. No hive loss is reported.
I029512-00010	Agricultural area	8/10/2016	NC	Not Reported	Probable	Undetermined	Honey Bee	4 bee hives	Mortality, spinning/shaking bees	On 10 August 2016 a beekeeper in North Carolina reported that he was concerned that his bees were dying due to being exposed to pesticides. Of the four beehives on his property, three hives seemed to have lost some, if not all, of their foraging bees. The bees were showing symptoms of spinning and shaking. Laboratory analysis of dead bees detected the presence of imidacloprid, bifenthrin, and diethyltoluamide. Since a source of insecticides could not be located and a neighbor's bee-hives were not affected, this case was closed.
I029807-00001	Agricultural area	3/1/2017	CA	Port Lucie	Possible	Registered Use	Honey Bee	250 hives	Mortality	Article dated March 31, 2017. Beekeeper in Port St Lucie area of Florida has lost more than 250 hives in past few years. Of 1,400 bee yards he originally maintained in three coastal counties, today only 300 to 400 remain intact. Beekeeper claimed die offs coincided with use of mosquito control use of Biomist products containing Permethrin. Beekeepers in the area generally are informed about spraying and hive areas are GPS tracked, but this owner has not notified County about locations of hives or filed an official complaint.
		No new honey bee incidents to report for bifenthrin from November 2018 to August 2019								

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
AQUATIC INCIDENTS										
		No new aquatic incidents to report for bifenthrin from November 2018 to August 2019								

Table 4. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EHS) for cyfluthrin

Incident ID	Use Site	Date2	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I028705-001 (updated by I028254-006 and I028719-001)	Pumpkin	7/25/2015	NC	Not Reported	Possible	Registered Use	Honey Bee	24 colonies	Mortality	On July 25, 2015, the North Carolina Department of Agriculture and Consumer Services, Pesticide Section initiated an investigation about a possible bee kill. The incident occurred on a pumpkin farm where 24 affected hives. The application of fungicide and insecticide were made at night according to the grower. The application consisted of Tombstone (cyfluthrin), Fulfill (pymetrozine), and Bravo (chlorothalonil). All three pesticides were detected on samples of vegetation. Analysis of dead bees detected chlorothalonil, pymetrozine, carbaryl, and analysis of the pollen detected carbaryl.
I029547-023	Not Reported	7/1/2015	IA	Cedar	Possible	Intentional Misuse	Honey Bee	Not Reported	Mortality	A ground application of Tombstone Helios Insecticide resulted in a bee kill near Tipton, Iowa. The application was made near beehives and was considered an Iowa bee rule violation. No civil penalties were enforced, but they did receive a warning letter and official notice.
		No new honey bee incidents to report for cyfluthrin from November 2018 to August 2019								
AQUATIC INCIDENTS										
		No new aquatic incidents to report for cyfluthrin from November 2018 to August 2019								

Table 5. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for cypermethrin

Incident ID	Use Site	Date2	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I028712-00004	Asparagus	8/12/2015	IA	Not Reported	Probable	Registered Use	Honey Bee	Several colonies	Mortality	T. S. Weaver Farms, Inc. reported a bee kill incident in 2013 attributed to drift to their apiary from ground applications of Mustang Max Insecticide to hay, fruit and vegetables. Residue analysis confirmed cypermethrin on asparagus leaves.
		No new honey bee incidents to report for cypermethrin from November 2018 to August 2019								
AQUATIC INCIDENTS										
		No new aquatic incidents to report for cypermethrin from November 2018 to August 2019								

Table 6. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for cyphenothrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for cyphenothrin from November 2018 to August 2019								

Table 7. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for deltamethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for deltamethrin from November 2018 to August 2019								

Table 8. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for d-phenothrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I029283-00002	Residential	8/13/2016	IA	Not Reported	Possible	Misuse	Honey Bee	Not Reported	Mortality	In Mitchellville, Iowa Black Flag Fogging Insecticide was used at a at a residence for 3 years. It was stated that all the bees, birds, and bats in the area began dying last spring-summer (2015) due to excessively use of the product. The date the resident became aware of in incident was October 15,2016. Much of this incident report involves detrimental effects to human inhabitants of her residence after neighbor used product.
I029019-00006	Wide Area	5/11/2016	OR	Jackson	Possible	Registered Use	Honey Bee	Few Hundred	Mortality	On May 19, 2016 a report was received by Jackson County Vector Control regarding a bee kill in Jackson County, Oregon. After truck mounted fogging operations using Anvil insecticide in the area a local beekeeper reported 2 of her hives had dead bees near entrances. Samples from lab analysis showed no Sumithrin and Piperonyl butoxide at MRL. No further investigation is planned.
		No new honey bee incidents to report for d-phenothrin from November 2018 to August 2019								
AQUATIC INCIDENTS										
I016634-001	Wide Area	6/21/2005	ND	Stutsman	Possible	Undetermined	Koi	4 fish	Mortality	A person who applies mosquito adulticides in North Dakota reported that a resident had complained that four of her koi fish died after he had driven his truck down streets and alleys spraying Anvil. The nearest edge of the pond was 30 feet from the alley. The pond was not visible from the alley because of vegetation growing between the two. The pond owner performed a 100% water change after observing the fish gasping at the surface for air. It is not clear if the fish died before or after a 100% water change. Six fish survived.
		No new aquatic incidents to report for d-phenothrin from November 2018 to August 2019								

Table 9. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EHS) for esfenvalerate

Incident ID	Use Site	Date ²	State	County	Cert. Code	Legal Code ³	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I029770-00001	Agricultural Area	2/11/2017	CA	Fresno	Probable	Unknown	Honey bees	Thousands	Incapacitation / Mortality	This is a follow up to an initial report of dying hives in California (I029671-001). Samples were taken in colonies up to 3 miles from spray areas. Within the bee samples, the number of pesticides detected in a single sample ranged from 7 to 10; esfenvalerate was among the 23 total chemicals detected. Within the bee samples, the chemicals detected with the highest frequency included the amitraz degradate DMPF (100%), chlorpyrifos (100%), iprodione (100%), oxyfluorfen (100%), pendimethalin (100%), tebuconazole (100%), and propiconazole (90%. Similarly, bee bread samples from asymptomatic colonies also contained several of the chemicals. Chlorpyrifos was detected in 100% of the bee samples and 88% of the bee bread samples. Though generally not very toxic to bees fungicides are often detected in pollen and bee bread samples as well as some persistent herbicides. Several of the detected insecticides are known to be highly toxic to bees.
		No new honey bee incidents to report for esfenvalerate from November 2018 to August 2019								
AQUATIC INCIDENTS										
I030380-00001	Bean	8/14/2017	MO	Clark (city)	Not Reported	Accidental Misuse	Crayfish, Bluegill, Bass, Grass Carp, and Frogs	100+ each	Mortality	A homeowner called NPIC (National Pesticide Information Center) after two products were accidentally applied to his pond by helicopter making an application to a nearby bean field on August 14th. A neighbor called and reported everything in the pond died except for a snapping turtle and paint turtles. Applicator was applying products with esfenvalerate and a cyproconazole/picoxystrobin mixture.
		No new aquatic incidents to report for esfenvalerate from November 2018 to August 2019								

Table 10. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for etofenprox

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for etofenprox from November 2018 to August 2019								

Table 11. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for fenpropathrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for fenpropathrin from November 2018 to August 2019								

Table 12. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for flumethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for flumethrin from November 2018 to August 2019								

Table 13. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for gamma-cyhalothrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for gamma-cyhalothrin from November 2018 to August 2019								

Table 14. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for imiprothrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for imiprothrin from November 2018 to August 2019								

Table 15. Summary of 2018 Update of Honey Bee Ecological Incident Reports in the Incident Information Systems (IDS and EIIS) for Lambda-cyhalothrin

Incident ID	Use Site	Date ²	State	County	Cert. Code ³	Legal Code ⁴	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I028958-00001	Alfalfa	6/14/2016	MN	Not Recorded	Probable	Registered Use	Honey bee	1000 hives	Mortality	On 19 June 2016 a bee kill report indicated that roughly 1000 out of 7200 colonies were affected in apiaries in Minnesota. Bees had been contracted out over the year for almond production and then transferred to Texas in the spring. They were then relocated back to Minnesota. The colonies were distributed across roughly 200 bee yards in Minnesota; however, only roughly 20 yards located in the central portion were impacted. On 14 June 2016 the beekeepers found the colonies were in robust condition and without varroa mites being an issue. The colonies were previous treated with Apiguard. Warrior pesticide had been purchased in the vicinity of the affected colonies and Grizzly had been applied near bee colonies when wind speeds exceed 15 mph.

I028958-00002	Agricultural area	6/1/2016	MN	Not Recorded	Unlikely	Registered Use	Honey bee	1000 colonies	Mortality	In Minnesota on June 19, 2016 there a bee incident involving 1000 colonies was reported in vicinity of agricultural fields (soy, corn, alfalfa) adjacent to the affected yard. Beekeepers were assisting almond growers in the spring, then transferred to Texas and then to Minnesota in 20 different bee yards. None of the crops were in bloom. The exposure of the bees to toxic chemicals may be occurring while bees are foraging.
I029416-00002	Not Recorded	5/26/2016	OH	Hancock	Probable	Unknown	Honey bee	Hives	Mortality	Between 22 and 25 May 2016 there was a bee kill reported in Hancock County, Ohio. Bees were reported dying in 160 hives at one location and 68 hives in a second location. Area farmers had been planting wheat adjacent to location. Prosaro fungicide had been used. The beekeeper attributed this to the bee kill. The beekeeper had bees at other locations in Ohio and did not have dying bees.
I029547-00012	Not Recorded	7/25/2016	IA	Not Recorded	Possible	Unknown	Honey bee	Not Recorded	Mortality	Iowa Case number 17.0047. Beekeeper found dead bees while looking for monarch butterflies (by the milk weed plants). This is unusual because these plants are at least 1 mi from any field. He did not observe any problems w/ his 30 hives. Analysis for residues still pending on aerial application of Cobalt Advanced (chlorpyrifos) in the area.
I029547-00018	Agricultural area	8/3/2016	IA	Not Recorded	Not Recorded	Misuse	Honey bee	Not Recorded	No effects observed	An aerial application 1/2 mi N of bee hives at 2-3 PM in the day near Readlyn, Iowa. Beekeeper wanted to know if any product toxic to bees were applied? This would be a violation of Iowa bee rule. Province insecticide containing cyhalothrin was used and is highly toxic to bees.
		No new honey bee incidents to report for lambda-cyhalothrin from November 2018 to August 2019								

AQUATIC INCIDENTS

I030281-00001	Agricultural area	7/24/2017	OH	Defiance	Probable	Registered Use	Bluegill, catfish, smallmouth bass	Not Recorded	Mortality	Following a July 24, 2017 aerial application, a rural homeowner reported fish kill in Ohio. Tetraconazole was one of the active ingredients mentioned as being aerially applied the day of the kill observation. However, Lambda Cyhalothrin, Picoxystrobin and Cyproconazole were aerially also applied to an adjacent field that day. No residue analysis is presented in the report for the latter actives. Bluegill, Smallmouth bass, and Catfish were killed. Tetraconazole was found in vegetation(0.5ppm) and sediment (0.7 ppb) samples.
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		No new aquatic incidents to report for lambda-cyhalothrin from November 2018 to August 2019									

Table 16. Summary of 2018 Update of Honey Bee Ecological Incident Reports in the Incident Information Systems (IDS and EHS) for Momfluorothrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for momfluorothrin from November 2018 to August 2019								

Table 17. Summary of 2018 and 2019 Search for Honey Bee Ecological Incident Reports in the Incident Information Systems (IDS and EHS) for Permethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I028174-00001	Not Reported	9/14/2015	TN	Sevier	Highly Probable	Misuse (intentional)	Honey Bee	Several hives	Mortality	A bee kill incident was reported in Sevierville, TN. The bees were killed outright. He suspected that on September 13 2015 between 4pm and the morning unknown person poisoned his beehives. Permethrin residues at 98 ppm was found on honeybees. This is very high level and higher than would occur from transport back to hive or from normal spray drift. Intentional poisoning is a possible cause. The case is still under investigation.
I029512-00003	Residential	3/14/2016	Not Reported	Not Reported	Possible	Registered Use	Honey Bee	21 hives	Mortality	On March 14, 2016 a beekeeper's claim was investigated that 20 of 21 hives were lost due to local mosquito control spraying. A treatment of Apiguard had been made to the hives, not the recommended two treatments. High levels of varroa mite infestation were found in samples. The insecticide used in the mosquito treatment was MasterLine Kontrol 4-4 (ai permethrin, piperonyl butoxide), EPA Reg. No. 73748-4. (PDF was Non-redacted for PII- not attached) A sample of dead bees were collected. A total of 142 mites were found in a 300-bee sample. It was determined that the losses were related to varroa mites and the associated viruses. Pesticide exposure was not a factor in the colonies decline. The citizen inquiry has been closed.
I029391-00001	Not Reported	9/22/2016	MS	Marshall	Not Reported	Not Reported	Honey bee	Not Reported	Not Reported	A Bee incident was reported in Byhalia, MS.

		No new honey bee incidents to report for permethrin from November 2018 to August 2019								
AQUATIC INCIDENTS										
IO29225-00001	Pond	9/16/2016	IL	Lake	Not Reported	Not Reported	Fish	Not Reported	Mortality	On July 1, 2016 a truck-mounted sprayer made by commercial licensed applicator to a residential driveway and to Village of North Barrington, Illinois to treat for mosquitoes. The next day a property owner and reporter, discovered that fish had been killed in his private pond on his property. The reporter suggested the ULV spray was the cause of the dead fish. The applicator has made applications to the area in past years, up to 8+ times per season at a rate of 0.5 ft oz/acre. No prior reports of incidents have been filed.
		No new aquatic incidents to report for permethrin from November 2018 to August 2019								

Table 18. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for Prallethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for prallethrin from November 2018 to August 2019								

Table 19. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for Pyrethrins

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for pyrethrins from November 2018 to August 2019								

Table 20. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EHS) for Tau-fluvalinate

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I026820-00007	Agricultural area	4/17/2012	Canada	Ontario	Possible	Undetermined	Honey Bee	2600	Mortality	Near Hensall in Ontario, Canada a large bee kill incident was reported on April 17 2012, involving an apiary with 80 colonies which lost about 1 hive every 4 days for many weeks. A corn field was planted with treated seed via air seeder and drift of the chemicals was suspected. A yard 5 miles south was not affected which was 40-75 ft. north of the bee yard. Pioneer with active ingredient Thiamethoxam, DeKalb with active ingredient Clothianidin, and an unnamed product a with active ingredient Fluvalinate-TAU were used. Bee deaths continued to occur weeks after application with bees on their backs, twitching, and dead queens observed outside the hives. Recovery was not complete until July 2.
I026819-00006	Agricultural area	4/17/2012	Canada	Ontario	Possible	Undetermined	Honey Bee	80 hives	Mortality	On April 12th, 2012 a bee kill incident was reported in St. Dominique, Quebec, Canada. It was reported that the active ingredients Clothianidin, Thiamethoxam, and Fluvalinate-Tau were used on a corn field near a bee yard. Bees were probably exposed to drift from the air seeder. Dying bees were noted for days and 80 hives were affected, about 8000 bees per day displayed symptoms leading to death including laying on back, dead queens outside the hives, no pollen on legs, and vibrating. Residue analysis was conducted.
I026818-00001	Agricultural area	5/3/2012	Canada	Ontario	Probable	Undetermined	Honey Bee	Not Reported	Mortality	In May of 2012 near Aylmer in Ontario, Canada a bee kill was reported. Samples detected active ingredients Clothianidin and Fluvalinate-TAU. It was unknown if the application was made legally.
I026800-00001	Agricultural area	5/4/2012	Canada	Ontario	Probable	Undetermined	Honey Bee	27 hives	Mortality	This is a PMRA report on mortality of honeybees in 27 hives in a bee yard in Grey city in Ontario, Canada. Dead bees were first observed on May 14, 2012. Active ingredients detected were Acetamiprid, Clothianidin, and Fluvainate-Tau. Number of affected bees was not included in the report.
I026800-00007	Not Reported	5/14/2012	Canada	Ontario	Possible	Undetermined	Honey Bee	Not Reported	Mortality	Near Bruce in Ontario, Canada Acetamiprid, Clothianidin, and Fluvalinate-TAU were implicated in a bee kill. This was reported or first observed on 14 May, 2012. Limited information was provided on source and incident was classified as minor.

I026800-00005	Not Reported	5/14/2014	Canada	Ontario	Not Reported	Not Reported	Honey Bee	Not Reported	Mortality	A bee incident was reported on May 14, 2012 near Grey in Ontario, Canada. The active ingredients were Acetamiprid, Clothianidin, and Fluralinate were detected in samples. Details regarding number of hives in the bee yard or number of dead bees was not reported.
I028254-00007	Not Reported	8/3/2015	NC	Not Reported	Probable	Registered Use	Honey Bee	1 hive	Mortality	A bee kill was reported in N.C. involving a single hive on August 3, 2015. Samples of dead bees, pollen from the affected hive, vegetation from a plum tree, and vegetation from a pea plant garden were collected for laboratory analysis. Laboratory analysis of the pollen sample detected fluvalinate and coumaphos. Laboratory analysis of the sample collected from property detected DEET and carbaryl.
I030177-00004	Agricultural area	5/24/2017	OR	Not Reported	Probable	Undetermined	Honey Bee	1 hive	Mortality	On 05/26/2017 in Tumulo near Bend, Oregon a beekeeper reported dead bees outside his hive which was placed on private land. The hive had been in place for about two weeks and appeared to be fine. He said the owners of the property went away on the weekend of May 20 and returned to find many dead bees outside the hive. The beekeeper brought a new hive and moved the frames in to it from the old one. The bees apparently still died off. Investigator observed some of the bees having difficulty moving and righting themselves. Few bees were seen entering or exiting the hive. The original hive had a screen at its base, and it was nearly fully covered in dead bees. She collected bees from the hive and submitted for to ODA Lab analysis. Two pesticide active ingredients, coumaphos and fluvalinate, were found in pollen in the hive at 20 PPB and 57 ppb, respectively.
AQUATIC INCIDENTS										
		No new aquatic incidents to report for tau-fluvalinate from November 2018 to August 2019								

Table 21. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIIS) for Tefluthrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										

No new honey bee incidents to report for tefluthrin from
November 2018 to August 2019

AQUATIC INCIDENTS

B0000300-79	Agricultural area	Not Reported	OH	Not Reported	Probable	Misuse (accidental)	Bluegill	41	Mortality	ICI Agricultural Products reported this incident to the EPA to comply with FIFRA Section 6(a)(2). Force 1.5 G (Tefluthrin) an insecticide was applied by a farmer on corn in violation of the labeling instructions. Force 1.5 granules were not incorporated into the top one-inch soil and it was applied as a band treatment rather than an in-furrow treatment. Both these practices were contrary to the labeling instructions. Force 1.5 G somehow end up in the nearby fish pond thus, resulted in a fish kill near Georgetown, Ohio.
B0000501-39	Corn	5/30/1991	OH	Brown	Probable	Misuse (accidental)	Bluegill, Channel Catfish	Unknown	Mortality	To comply with 6(a)2 regulations, ICI Americas reported a fish kill near Georgetown, Ohio, that was caused by the runoff of FORCE from a no-till corn field following a rainstorm.
I000038-001	Corn	5/19/1992	NE	Seward	Probable	Misuse (accidental)	Catfish	35-40	Mortality	The fishkill was preceded by heavy rain. Corn planting was accompanied by application of 10-30-0 fertilizer and preceded by application of anhydrous nitrogen fertilizer. The event occurred 3 1/2 weeks after corn planting and 4 days after intense rainfall. Granules of tefluthrin were not incorporated into the soil, as required. The formulation of this chemical was GFU524 and not ICI's new alternate formulation which should have been used at this time.
I000538-001	Corn	5/13/1993	IN	Franklin	Probable	Registered Use	Bass, Bluegill, Carp, Catfish	Not Reported	Mortality	Fish kill in Brookville in pond (2 acres) which received 5 pounds copper sulfate 05/05/93 to kill algae. FORCE applied 05/10/93. Rain fell 05/12/93.
I001081-001	Corn	4/30/1994	IL	Adams	Highly Probable	Misuse	Catfish	600	Mortality	According to the investigative report a 30-acre cornfield was treated with tefluthrin and intermittent rains resulted in runoff into a nearby 2.5 acre pond (depth 1 to 20 ft.) and mortality to more than 600 catfish. The insecticide formulation was a no-longer manufactured gypsum formulation which has now been replaced by a new montmorillonite clay formulation. The insecticide was not soil-incorporated which is a label requirement. It was also reported that many of the affected fish were housed in a small fish cage which added to the stress conditions. The pond was reported to be somewhat eutrophic, stagnant and

										foul odored with insufficient DO and water flow. Some fields surrounding the pond had other chemicals applied, such as Eradicane 6.7E (4 pt/A), Extrazine II DF (2.5 lb/A), Aatrex 9-0 (1.25 lb/A) and dry anhydrous ammonia (180 lbs/A actual nitrogen). Pond water and hydrosol samples were collected in triplicate for pesticide analysis. It was also noted that a 10 ft area of grass burnback (phytotoxicity) existed near the pond. This indicated possible runoff of herbicide.
I001081-002	Corn	5/6/1994	IL	Macoupin	Highly Probable	Undetermined	Bass, Bluegill	Not Reported	Mortality	According to the investigative report a 30 acre cornfield was treated with tefluthrin and intermittent rains resulted in runoff into a nearby 1.0 acre pond (depth 1 to 15 ft.) and mortality to an unspecified number of bluegill and bass. The insecticide formulation was a no longer manufactured gypsum formulation of tefluthrin which has now been replaced by a new montmorillonite clay formulation. The insecticide was not soil-incorporated which is a label specification for this pesticide. The pond was reported to be somewhat eutrophic, stagnant and foul odored with insufficient dissolved oxygen and water flow. Some fields surrounding the pond had other chemicals applied, such as Extrazine II DF (4.5 lb/A), and 140 lbs/A Nitrogen. Pond water and hydrosol samples were collected in triplicate for pesticide analysis. It was also noted that an area of grass burnback (phytotoxicity) existed near the pond. This indicated possible runoff of herbicide.
I005805-002	Not Reported	1/1/1997	IL	Christian	Possible	Undetermined	Bluegill, Carp, Channel Catfish, Crappies, Perch	Not Reported	Mortality	Dead carp, bluegill, perch, crappies and channel catfish were found dead. Unknown cause, suspect pond turnover.
I005805-003	Not Reported	1/1/1997	IN	Scott	Possible	Undetermined	Not Reported	Not Reported	Mortality	Dead fish observed 3 days after a 3 inch rain. Small one acre pond, suspect pond turnover.
I009314-006	Not Reported	5/16/1997	IL	Christian	Possible	Undetermined	Bluegill, Carp, Channel Catfish, Crappie	Not Reported	Mortality	In OWANECO, IL, there was a fish kill of alleged unknown cause but of suspected pond turnover. Apparently the insecticide FORCE 3G was involved as that was the product named in claim injury.

I005395-001	Corn	5/16/1997	IL	Christian	Probable	Misuse (accidental)	Unknown Fish	Not Reported	Mortality	Tefluthrin (Force) was applied to a cornfield at 4.56 lbs/acre on April 15, 1997. During the first few days of May, 3" of rain fell within a 72-hour period which caused a runoff into several ponds where the fish were killed. Zeneca's account states that the granules were not incorporated following the "T"-band treatment, and a minimum 60-foot buffer near aquatic bodies was not observed.
I009314-007	Not Reported	5/30/1997	IN	Scott	Possible	Undetermined	Not Reported	Not Reported	Mortality	In Scottsburg, IN, there was a suspected pond turnover allegedly causing a fish kill three (3) days after a 3 inch rain. Dead fish were observed in a small one acre pond. Apparently two pesticides were involved in the claim injury report: Warrior and Force 3G.
I007440-001	Corn	5/15/1998	IN	Boone	Probable	Registered Use	Crayfish, Frog, Turtle, Unknown Fish	Not Reported	Mortality	An aquatic incident occurred in the smaller of two residential ponds in Zionsville, IN that had recently been treated with copper sulfate for aquatic control. Deaths of turtles, frogs, tadpoles, crayfish and fish were reported. Twenty-five rented acres from a large parcel of 160 acres is located next to this pond and is cropped to corn. The pond is thought to receive runoff from the corn field through a wooded buffer area. Treatment with copper control was on Monday, May 11 and fish were observed surfacing and jumping out of the water on 15 May. FORCE insecticide (trifluthrin) and BICEP (atrazine and metolachlor) were applied to the corn field on 04/26/98. The site investigation did not take place until 19 June.
I007206-001	Corn	5/28/1998	KY	Henderson	Probable	Registered Use	Bass, Bluegill	300	Mortality	After pesticide was applied to a corn field (20 acres) the day following planting, heavy rains (3 inches in 45 min) were recorded the next week. Thereafter, a fish kill occurred in a neighbor's man-made pond (0.5 to 0.75 acres) A buffer, 30-40 feet, of unmowed tall fescue and small trees proved ineffective in holding off runoff. Trash movement went into the pond as well as sediment erosion, judging from deposition patters observed, over flattened grass. The pond overran its banks, exceeded its drainage capacity and backed up into 0.25 acres of treated field.

Table 22. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EIS) for Tetramethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE and AQUATIC INCIDENTS										
		No new honey bee or aquatic incidents to report for tetramethrin from November 2018 to August 2019								

Table 23. Summary of 2018 and 2019 Search for Honey Bee and Aquatic Incident Reports in the Incident Information Systems (IDS and EHS) for Zeta-cypermethrin

Incident ID	Use Site	Date	State	County	Cert. Code	Legal Code	Species	Magnitude	Effect	Summary Description
HONEY BEE INCIDENTS										
I029547-00015 (PC code 129064, zeta-cy)	Not Reported	7/29/2016	IA	Not Reported	Not Reported	Not Reported	Honey bee	Not Reported	Not Reported	Violation of Iowa bee rule suspected when aerial application was made with bifenthrin during late morning hours (7-10 AM) when bees would normally be foraging. Beekeeper registered complaint. The product "Hero Insecticide" is co-formulated with zeta-cypermethrin and bifenthrin.
I029385-00002 (PC code 129064, zeta-cy)	Residential	5/12/2016	IN	Ripley	Possible	Registered Use	Honey Bee	Multiple Hives	Mortality	On 12 May 2016 a bee keeper near Milan, Indiana reported a helicopter was applying pesticides and expressed concern for overlapping into her property and bees hives and later discovered bees had been killed. Prosaro fungicide mixture and Mustang Maxx products were applied. A wheat field was 172 yds from the beehives. It was determined that the wind was out of the North. The beekeeper met with farmer and determined that Tebuconazole had been sprayed. Samples were analyzed by state lab, but only for tebuconazole.
		No new honey bee incidents to report for zeta-cypermethrin from November 2018 to August 2019								
AQUATIC INCIDENTS										
		No new aquatic incidents to report for zeta-cypermethrin from November 2018 to August 2019								